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TRANSMITTAL FORM

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Total Number of Pages in This Submission

Application Number	09/397,494
Filing Date	September 15, 1999
First Named Inventor	Balaban, David J.
Art Unit	2857
Examiner Name	Jeffrey R. West
Attorney Docket Number	018547-037510US

ENCLOSURES *(Check all that apply)*

- ☒ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☒ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) (please identify below):
  Return Postcard
  Appellant's Brief Under 37 CFR §1.192 (in triplicate)

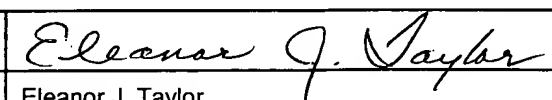
Remarks: The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Townsend and Townsend and Crew LLP		
Signature			
Printed name	Kent J. Tobin		
Date	December 1, 2005	Reg. No.	39,496

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Signature			
Typed or printed name	Eleanor J. Taylor	Date	December 1, 2005

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($) 500

Complete if Known	
Application Number	09/397,494
Filing Date	September 15, 1999
First Named Inventor	Balaban, David J.
Examiner Name	Jeffrey R. West
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METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 20-1430 Deposit Account Name: Townsend and Townsend and Crew LLP

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____	-20 or HP = _____	x _____	= _____

HP = highest number of total claims paid for, if greater than 20

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____	-3 or HP = _____	x _____	= _____

HP = highest number of independent claims paid for, if greater than 3

Multiple Dependent Claims Fee ($)	Fee Paid ($)
_____	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 =	_____ / 50 =	_____ (round up to a whole number)	x _____	= _____

4. OTHER FEE(S)

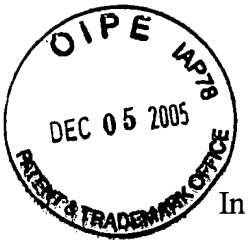
	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	
Other: Filing a brief in support of an appeal	500

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 39,496	Telephone 650-326-2400
Name (Print/Type)	Kent J. Tobin		Date December 1, 2005

ZMW AF

PATENT
TTC No.: 18547-037510US
Client No.: 3206.1



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:

DAVID BALABAN *et al.*

Application No.: 09/397,494

Filed: September 15, 1999

For: COMPUTER BASED METHOD FOR PROVIDING A LABORATORY INFORMATION MANAGEMENT SYSTEM

Examiner: Jeffrey R. West

Art Unit: 2857

Confirmation No.: 8817

APPELLANT'S BRIEF UNDER 37 CFR §1.192

MAIL STOP APPEAL
BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants, in the above-captioned patent application, appeal the final rejection of claims 26-32 and 34-58. The claims on appeal have been finally rejected pursuant to MPEP § 706.07(b). Accordingly, this appeal is believed to be proper.

I. REAL PARTY IN INTEREST:

The real party in interest for the above-identified application is AFFYMETRIX, INC., having its principal place of business at 3380 Central Expressway, Santa Clara, California 95051. The assignment is recorded in the U.S. Patent and Trademark Office on April 6, 2000 at Reel 010745/Frame 0247.

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II. RELATED APPEALS AND INTERFERENCES:

There are no appeals or interferences related to the present appeal.

III. STATUS OF CLAIMS:

Claims 1-25 and 33 are canceled.

Claims 26-32 and 34-58 are pending and subject to this appeal. Claims 26-32 and 34-58 were rejected under 35 U.S.C. § 103(a) upon the grounds set forth in the Final Office Action mailed on July 13, 2005.

IV. STATUS OF AMENDMENTS:

Applicants filed a Response under 37 C.F.R. § 1.114 on May 13, 2005 in reply to the Final Office Action mailed on January 14, 2005.. No amendments were made. A Final Office Action mailed July 13, 2005 indicated that the Response did not place the application in condition for allowance.

In accordance with 37 C.F.R. § 1.192(c)(9), a copy of the claims involved in the appeal are contained in the Appendix attached hereto.

V. SUMMARY OF CLAIMED SUBJECT MATTER:

Embodiments in accordance with this application disclose methods and computer programs for managing probe array experiments over a network. Independent claims 26, 32, and 34 are reproduced in part as follows:

> 26. A method . . . comprising:
> accepting signals from the user input device to define a parameter of a probe array experiment;
> transferring the parameter to the network;
> receiving experiment results from the network, wherein the experiment results include results from the probe array experiment using the parameter; and
> displaying the experiment results on the display device. (Emphasis added)
>
> * * *
>
> 32. A method . . . comprising:
> using the processor to display steps of setup and execution of a probe array experiment over the network; and
> using the processor to display a result from the network for a sample for one or more of the displayed steps.

* * *

34. A computer program . . . including
one or more instructions for accepting signals from the user input device to define a parameter of a probe array experiment;
one or more instructions for transferring the parameter to the network;
one or more instructions for receiving experiment results from the network, wherein the experiment results include results from the probe array experiment using the parameter; and
displaying the experiment results on the display device.

In the embodiment of first pending independent claim 26, a method to accept laboratory experiment information for control of a laboratory experiment comprises defining a parameter of a probe array experiment, and transferring the parameter to a network. As shown and described in connection with Fig. 10D, fluid station control screens 1031 and 1032 provide a user with the capability to control a fluidics station based upon selection of particular experiment names and protocols. (Specification at page 19, line 30 - page 20, line 3; Fig. 10D.) As shown and described in connection with Fig. 10E, scanner control screens 1041 and 1042 control scanning to a local drive or to a network, providing the capability to the user to specify experiment names, probe array types, number of scans to be performed, assay-types, sample projects, experiments, and a display of the scanned experiments. (Specification at page 20, lines 4-11; Figs. 10E.)

In the embodiment of second pending independent claim 32, a method for displaying laboratory experiment information comprises using a processor of a computer system coupled to a network. (Specification at page 8, lines 10-21; Fig. 2A.)

In the embodiment of third pending independent claim 34, a computer program embodied on a computer-readable medium for a method to accept laboratory experiment information includes one or more instructions for accepting signals from a user input device to define a parameter of a probe array experiment, for transferring the parameter to a network, for receiving experiment results from the network, and displaying the experiment results on a display device. (Specification at page 9, lines 10-24; Fig. 3A.)

In the embodiment of claim 41, the method of accepting signals to define the probe array experiment parameter comprises accepting signals to control hybridization. (Specification at page 10, lines 5-13; Fig. 3C.)

In the embodiment of claim 45, the processor is used to display setup and execution of grid alignment in the probe array experiment. (Specification at page 14, lines 3-12; Fig. 6D.)

In the embodiment of claim 47, the processor is used to display setup and execution of cell average analysis in the probe array experiment. (Specification at page 14, lines 13-22; Fig. 6E.)

In the embodiment of claim 50, a displayed parameter of the probe array experiment comprises at least one of a hybridization fragmented expression vessel identifier, a probe array image identifier, sample information, and experiment information. (Specification at page 13, line 23 - page 14, line 2; Fig. 6C.)

VI. GROUNDS OF REJECTION PRESENTED FOR REVIEW:

A. Claims 26, 31, and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Layne et al., U.S. Patent No. 5,968,731 (Layne et al. '731), in view of Dehlinger, U.S. Patent No. 5,723,320 (Dehlinger '320).

B. Claim 32 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Layne et al. '731 in view of Dehlinger '320 and further in view of Wong et al., U.S. Patent No. 4,875,859 (Wong et al. '859).

C. Claims 26-31, 34-36, 41, 42, 51, 52, 57, and 58 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al., U.S. Patent No. 6,100,030 (McCasky Feazel et al. '030), in view of Layne et al. '731.

D. Claims 32, 43, 44, 49, and 50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Wong et al. '859.

E. Claims 37, 38, 53, and 54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Laughon, U.S. Patent No. 6,046,165 (Laughon '165).

F. Claims 39, 40, 55, and 56 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Lipshutz et al., U.S. Patent No. 5,733,729 (Lipshutz '729).

G. Claims 39, 40, 55, and 56 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Wheeless, Jr. et al., U.S. Patent No. 3,657,537 (Wheeless Jr. et al. '537).

H. Claims 45 and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and Wong et al. '859 and further in view of Laughon '165.

I. Claims 47 and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Lipshutz '729.

J. Claims 47 and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and Wong et al. '859 and further in view of Wheeless Jr. et al. '537.

VII. ARGUMENTS:

A. Claims 26, 31, and 34 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Layne et al. '731 in view of Dehlinger '320

Claims 26, 31, and 34 stand rejected as obvious under 35 U.S.C. §103, based upon Layne et al. '731 in combination with Dehlinger '320. These claim rejections are improper as described as follows.

Layne et al. '731 relates to testing of biological specimens with only a conventional testing apparatus comprising a 96-well microtiter plate (212), in conjunction with robotic fluid handling apparatuses. (See Fig. 7 below, and col. 11, line 49 - col. 13, line 12).

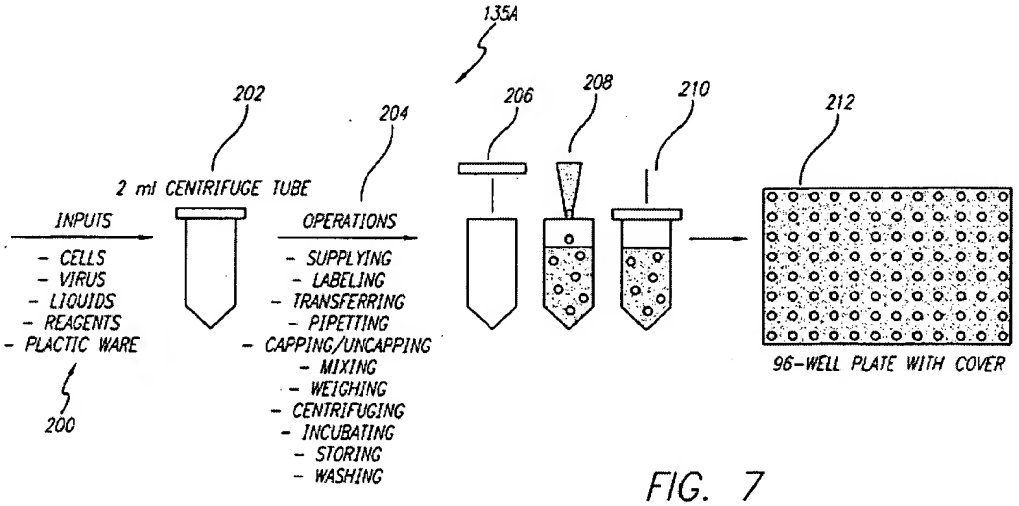

FIG. 7

Layne et al. '731 fails to include any teaching, or even suggestion, regarding transmitting parameters for a probe array experiment over a computer network, or communication of results from such a probe array experiment, over a computer network.

In an effort to provide such a teaching, the Examiner has combined Layne et al. '731 with Dehlinger '320. In order to establish a prima facie case of obviousness, "there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings." (MPEP 2143).

As previously noted, Layne et al. '731 describes conducting experiments involving robotic manipulation of conventional microtiter plates. The limited throughput of such techniques is well, known, as evidenced at least by the ninety-six (96) well capacity of the microtiter plate specifically shown and described by Layne et al. '731.

By contrast, probe array experiments performed in accordance with the claimed embodiments utilize a radically different technology that differs in significant ways from the robotic microtiter technology of Layne et al. '731. One important difference between these technologies, is the vastly increased data volumes data expected to result from the probe array experiments conducted in accordance with the present invention. For example, while Layne et al. '731 describe an experiment comprising at most ninety-six (96) wells at a time, Dehlinger '320 describes experiments in which data is simultaneously collected from large arrays comprising thousands of probes:

> A "high-density array" of oligonucleotides, probes, or gene fragments (regions) refers to a linear array of at least 100 regions/cm, or to a planar array of at least 1,000 regions/cm^2. (Emphasis added; col. 5, lines 31-34)

Thus, while conventional microtiter experiments of Layne et al. '731 would be expected to produce data from less than 100 probes at a time, the probe array experiments of Dehlinger '320 would be expected to produce data numbering in the thousands, or even hundreds of thousands, of probes. Reporting such voluminous experimental data over a network would require transmission of data volumes at a minimum ten times larger than any described by Layne et al. '731. Given this order of magnitude difference in data volumes expected from probe array experiments in accordance with the claimed embodiments, it is not surprising that Dehlinger '320

completely fails to provide any teaching or suggestion to communicate results from such probe array experiments over a network.

Of course, the instant application is replete with teaching and suggestion to communicate results of probe array experiments over a network. However, it is emphasized that the suggestion to combine reference teachings must come from the references themselves, and cannot be derived from Applicants own teachings:

> The tendency to resort to "hindsight" based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art. (Emphasis added; MPEP 2142)

Layne et al. '731 describes only the communication of relatively small volumes of data resulting from conventional robotic microtiter techniques. While Dehlinger '320 does describe the use of probe array techniques, this reference contains no teaching or even suggestion for its combination with Layne et al. '731, particularly in view of the order-of-magnitude difference in data volumes required for transmission. Finally, while the instant application provides ample disclosure regarding transmission of probe array experimental data over a network, the Examiner is strictly forbidden from relying upon hindsight to use the instant application to provide a motivation to combine the teachings of Layne et al. '731 and Dehlinger '320.

Owing to the failure of Layne et al. '731 et al. and Dehlinger '320 to suggest their combination to provide probe array experimental results over a computer network, it is respectfully asserted that claims 26, 31, and 34 cannot be considered obvious in light of those references. The instant claim rejections are improper and should be withdrawn.

B. Claim 32 is not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Layne et al. '731 in view of Dehlinger '320 and further in view of Wong et al. '859

Independent claim 32 stands rejected as obvious based upon the combination of Layne et al. '731 in view of Dehlinger '320 and further in view of Wong et al. '859. However, this further combination also fails to describe the communication of experimental results from a probe array experiment over a computer network.

Specifically, Wong et al. '859 describes only a method and apparatus for guiding a user to set up a generic signal measurement system, for example an oscilloscope. While Wong et al. '859 is certainly lengthy, review of this reference reveals that it contains no specific teaching regarding communication of data from a probe array experiment over a network. Wong et al. '859 also fails to provide any disclosure that would motivate one of ordinary skill in the art to combine it with either the conventional robotic microtiter experimental techniques described by Layne et al. '731, or the probe array experimental techniques described by Dehlinger '320.

Based upon the failure of Wong et al. '859 to teach or suggest the communication of probe array experimental data over a computer network, together with the lack of any teaching or suggestion for the combination of this reference with either Layne et al. '731 or Dehlinger '320, Applicants respectfully assert that claim 32 is patentable over the references relied upon by the Examiner.

C. Claims 26-31, 34-36, 41, 42, 51, 52, 57, and 58 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731

The Examiner maintains the rejection of claims 26-31, 34-36, 41, 42, 51, 52, 57, and 58 on the ground it would have been obvious to one having ordinary skill in the art to modify the invention of McCasky Feazel et al. '030 to include conducting the experiment over a network as taught by Layne et al. '731, providing a method for allowing access to biological samples in areas where access to laboratory materials and procedures is limited (see col. 8, lines 1-12 of Layne et al. '731) and providing means for linking the process to additional information and/or additional users to allow more thorough analysis by sharing samples (see col. 8, lines 38-43 and col. 10, line 64 - col. 11, line 11 of Layne et al. '731).

As described at length above, Layne et al. '731 fails to provide any teaching, or even suggestion, to communicate data from a probe array experiment over a computer network. Specifically, Layne et al. '731 describes only the use of conventional robotic microtiter experimental techniques.

The addition of Layne et al. '731 does nothing to supply this absent teaching. Specifically, like Dehlinger '320 discussed above, McCasky Feazel et al. '030 discloses the use of experimental techniques involving "very large scale immobilized polymer arrays ("VLSIPS™"

arrays). Such probe arrays "can include millions of defined probe regions on a substrate having an area of about 1 cm^2 to several cm^2, thereby incorporating sets of from a few to millions of probes" (Emphasis added; see col. 23, lines 59-64).

Again however, the probe array experimental techniques employed by McCasky Feazel et al. '030, stand in stark contrast with the conventional microtiter plate technology employed by Layne et al. '731. As described above, one significant difference is the increase by at least an order of magnitude, in the volume of data expected from probe array experiments. It thus comes as no surprise, that like Dehlinger '320, McCasky Feazel et al. '030 is entirely silent regarding resulting communication of such large streams of probe array data results over a computer network. This conspicuous lack of any reasonable nexus between the subject matter of McCasky Feazel et al. '030 and Layne et al. '731, strongly indicates the improper use of hindsight by the Examiner in their combination. Accordingly, claims 26-31, 34-36, 41, 42, 51, 52, 57, and 58 are patentable over McCasky Feazel et al. '030 in view of Layne et al. '731.

D. Claims 32, 43, 44, 49, and 50 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Wong et al. '859

Applicants respectfully submit that independent claim 32 is patentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Wong et al. '859 because, for instance, the combination of references does not teach or suggest displaying a result of a probe array experiment received over a computer network. Applicants believe claim 32 is patentable over these references at least due to the reasons as discussed above. Claims 43, 44, 49, and 50 depend from claim 32, and further recite a display setup and scanning aspects of the invention. Therefore, claims 32, 43, 44, 49, and 50 are patentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Wong et al. '859.

E. Claims 37, 38, 53, and 54 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Laughon '165

Claims 37 and 38 depending from claim 26, and claims 53 and 54 depending from claim 34, further recite instructions for accepting signals to define a grid alignment parameter in the probe array experiment.

Like Dehlinger '320 and McCasky Feazel et al. '030, Laughon '165 describes the use of probe array technology that would be expected to simultaneously produce results from many thousands of different probes:

> In a preferred embodiment, the combined use of photolithography and oligonucleotide chemistry is used to synthesize an array of as many as 400,000 different oligos on a 1.6 cm^2 glass slide. (Emphasis added; col. 32, lines 40-43)

And also like Dehlinger '320 and McCasky Feazel et al. '030, Laughon '165 contains absolutely no teaching or even suggestion, to communicate such voluminous probe array experimental data over a computer network. Laughon '165 also fails to provide any reasonable suggestion for its combination with the conventional robotic microtiter plate technology described by Layne et al. '731.

Therefore, for similar reasons stated above, claims 37 and 38 depending from claim 26, and claims 53 and 54 depending from claim 34 are patentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Laughon '165.

F. Claims 39, 40, 55, and 56 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Lipshutz '729 or Wheeless Jr. et al. '537

Claims 39 and 40 depending from claim 26, and claims 55 and 56 depending from claim 34, further recite accepting signals to define the probe array experiment parameter comprising accepting signals to control cell average analysis.

Lipshutz '729 merely describes the use of cell averaging in the context of probe array experimental techniques. However, Lipshutz '729 contains absolutely no teaching or even suggestion to communicate such probe array data over a network, as is recited by the claims.

Similarly, Wheeless, Jr. et al. '537 (which dates from way back in 1970), merely discloses the well-known technique of cell flow cytometry. This reference says absolutely nothing about the use of such techniques in combination with the claimed probe array technology, never mind communication over a network of the voluminous experimental data resulting from the use of such probe array technology.

Thus for similar reasons stated above, claims 39 and 40 depending from claim 26, and claims 55 and 56 depending from claim 34, are patentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of either Lipshutz '729 or Wheeless, Jr. et al. '537.

G. Claims 45 and 46 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and Wong et al. '859 and further in view of Laughon '165

Claims 45 and 46 depend from claim 32, and further recite signals controlling grid alignment. Laughon '165 is cited for disclosing compositions and methods for identifying and testing TGF-ß pathways against agonists and antagonists including signals used for sequence identification.

Laughon '165, however, does not cure the deficiencies previously described, in that it also fails to teach or suggest conducting or receiving data from, a probe array experiment over a computer network. Therefore, claims 45 and 46 are patentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and Wong et al. '859 and further in view of Laughon '165.

H. Claims 47 and 48 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of either Lipshutz '729 or Wong et al. '859 and further in view of Wheeless Jr. et al. '537

Claims 47 and 48 depending from claim 32 further recite signals controlling cell average analysis. Lipshutz '729 is cited for disclosing computer-aided probability base calling for arrays of nucleic acid probes on chips.

As discussed above, however, Lipshutz '729 does not cure the deficiencies previously raised, in that it also fails to teach or suggest conducting a probe array experiment over a computer network. Similarly, the attenuated combination of Wong et al. '859 with Wheeless Jr. et al. '537 also fails to teach or suggest the claimed subject matter.

As the reference combinations relied upon by the Examiner fail to teach or suggest conducting a probe array experiment over a computer network. Therefore, claims 47 and 48 are patentable over McCasky Feazel et al. '030 in view of Layne et al. '731 and further in view of Lipshutz '729 or Wong et al. '859/Wheeless Jr. et al. '537.

VIII. CONCLUSION:

In view of the foregoing arguments distinguishing claims 26-32 and 34-58 over the art of record, Applicants respectfully submit that the claims are in condition for allowance, and respectfully request that the rejection of these claims be reversed.

Respectfully submitted,

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KJT
60636102 v1

Attachments: Appendices

CLAIMS APPENDIX

1.-25. (Canceled).

26. (Previously Presented) A method for a user interface to accept laboratory experiment information for control of a laboratory experiment, the method using a computer system, the computer system including a processing system coupled to a network, wherein a user input device, display device and processor are coupled to the processing system, the method comprising

accepting signals from the user input device to define a parameter of a probe array experiment;

transferring the parameter to the network;

receiving experiment results from the network, wherein the experiment results include results from the probe array experiment using the parameter; and

displaying the experiment results on the display device.

27. (Previously Presented) The method of claim 26, further comprising

using the processor to display information sections including one or more of the following: sample, experiment, probe array.

28. (Previously Presented) The method of claim 26, wherein the step of accepting signals includes a substep of:

accepting signals to define a probe array image identifier.

29. (Previously Presented) The method of claim 26, wherein the step of accepting signals includes a substep of:

accepting signals to define a probe array type.

30. (Previously Presented) The method of claim 26, wherein the step of accepting signals includes a substep of:

accepting signals to indicate a probe array analysis set.

31. (Previously Presented) The method of claim 26, wherein the step of accepting signals includes a substep of:

accepting signals to indicate a target database for publishing experiment results.

32. (Previously Presented) A method for displaying laboratory experiment information, the method using a computer system, the computer system including a processing system coupled to a network, wherein a display device and processor are coupled to the processing system, the method comprising

using the processor to display steps of setup and execution of a probe array experiment over the network; and

using the processor to display a result for a sample for one or more of the displayed steps.

33. (Canceled)

34. (Previously Presented) A computer program embodied on a computer-readable medium for a method to accept laboratory experiment information, the method using a computer system, the computer system including a processing system coupled to a network, wherein a user input device, display device and processor are coupled to the processing system, the computer program including

one or more instructions for accepting signals from the user input device to define a parameter of a probe array experiment;

one or more instructions for transferring the parameter to the network;

one or more instructions for receiving experiment results from the network, wherein the experiment results include results from the probe array experiment using the parameter; and

displaying the experiment results on the display device.

35. (Previously Presented) The method of claim 26 wherein accepting signals to define the probe array experiment parameter comprises accepting signals to control scanning.

36. (Previously Presented) The method of claim 35 wherein the probe array experiment parameter comprises at least one of a probe array image identifier, an experiment name, a probe array type, a number of scans to be performed, an assay type, a sample project, an experiment, and a display of a scanned experiment.

37. (Previously Presented) The method of claim 26 wherein accepting signals to define the probe array experiment parameter comprises accepting signals to control grid alignment.

38. (Previously Presented) The method of claim 37 wherein the probe array experiment parameter comprises at least one of experiment information, file type, probe array information, sample information, probe array type, sample type, sample project, and manual/automatic grid alignment.

39. (Previously Presented) The method of claim 26 wherein accepting signals to define the probe array experiment parameter comprises accepting signals to control cell average analysis.

40. (Previously Presented) The method of claim 39 wherein the probe array experiment parameter comprises at least one of a sample project, an experiment name, a sample type, a probe array type, a user name, an image data/ probe array type, a cell average name, image data, cell data, and an algorithm.

41. (Previously Presented) The method of claim 26 wherein accepting signals to define the probe array experiment parameter comprises accepting signals to control hybridization.

42. (Previously Presented) The method of claim 41 wherein the probe array experiment parameter comprises at least one of a hybridization fragmented expression vessel identifier, a probe array image identifier, sample information, and experiment information.

43. (Previously Presented) The method of claim 32 wherein the processor is used to display setup and execution of scanning in the probe array experiment.

44. (Previously Presented) The method of claim 43 wherein a displayed parameter of the probe array experiment comprises at least one of a probe array image identifier, an experiment name, a probe array type, a number of scans to be performed, an assay type, a sample project, an experiment, and a display of a scanned experiment.

45. (Previously Presented) The method of claim 32 wherein the processor is used to display setup and execution of grid alignment in the probe array experiment.

46. (Previously Presented) The method of claim 45 wherein a displayed parameter of the probe array experiment comprises at least one of experiment information, file type, probe array information, sample information, probe array type, sample type, sample project, and a manual/automatic grid alignment.

47. (Previously Presented) The method of claim 32 wherein the processor is used to display setup and execution of cell average analysis in the probe array experiment.

48. (Previously Presented) The method of claim 47 wherein a displayed parameter of the probe array experiment comprises at least one of a sample project, an experiment name, a sample type, a probe array type, a user name, an image data/ probe array type, a cell average name, image data, cell data, and an algorithm.

49. (Previously Presented) The method of claim 32 wherein the processor is used to display setup and execution of hybridization in the probe array experiment.

50. (Previously Presented) The method of claim 49 wherein a displayed parameter of the probe array experiment comprises at least one of a hybridization fragmented expression vessel identifier, a probe array image identifier, sample information, and experiment information.

51. (Previously Presented) The computer program of claim 34 further comprising instructions for accepting signals to define a scanning parameter in the probe array experiment.

52. (Previously Presented) The computer program of claim 51 wherein the scanning parameter comprises at least one of a probe array image identifier, an experiment name, a probe array type, a number of scans to be performed, an assay type, a sample project, an experiment, and a display of a scanned experiment.

53. (Previously Presented) The computer program of claim 34 further comprising instructions for accepting signals to define a grid alignment parameter in the probe array experiment.

54. (Previously Presented) The computer program of claim 53 wherein the grid alignment parameter comprises at least one of experiment information, file type, probe array information, sample information, probe array type, sample type, sample project, and a manual/automatic grid alignment.

55. (Previously Presented) The computer program of claim 34 further comprising instructions for accepting signals to define a cell average analysis parameter in the probe array experiment.

56. (Previously Presented) The computer program of claim 55 wherein the cell average analysis parameter comprises at least one of a sample project, an experiment name, a sample type, a probe array type, a user name, an image data/ probe array type, a cell average name, image data, cell data, and an algorithm.

57. (Previously Presented) The computer program of claim 34 further comprising instructions for accepting signals to define a hybridization processes parameter in the probe array experiment.

58. (Previously Presented) The computer program of claim 57 wherein the hybridization process parameter comprises at least one of a hybridization fragmented expression vessel identifier, a probe array image identifier, sample information, and experiment information.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.